CLAIMS

1. A method for measuring a free insulin receptor α-subunit in blood, wherein the method comprises the steps of:

(1) contacting a blood sample with an antibody recognizing the insulin receptor α-subunit;

(2) detecting binding of said antibody to the insulin receptor α-subunit present in blood; and

(3) determining the amount of free insulin receptor α-subunit in blood based on the level of binding detected between said antibody and subunit.

2. The method of claim 1, wherein the antibody recognizing the insulin receptor α-subunit is a first antibody that is bound to a solid phase or comprises a label that can be bound to a solid phase, and the method comprises the step of detecting the insulin receptor α-subunit bound to the first antibody by binding a second antibody recognizing the insulin receptor α-subunit.

3. A reagent for measuring a free insulin receptor α-subunit in blood, wherein the reagent comprises an antibody recognizing the insulin receptor α-subunit.

4. A method for diagnosing diabetes, wherein the method comprises the steps of:

a) measuring the amount of a free insulin receptor α-subunit in a biological sample of a subject;

b) comparing the amount of the free insulin receptor α-subunit with that of a control; and

c) determining the subject to have diabetes when the amount of free insulin receptor α-subunit in the biological sample of the subject is greater than that of the control.

5. The method for diagnosis of claim 4, wherein the biological sample is a blood sample.

6. The method for diagnosis of claim 5, wherein the amount of the free insulin receptor α-subunit is measured by the method of claim 1.

7. A reagent for diagnosing diabetes, wherein the reagent comprises an antibody recognizing a peptide comprising the amino acid sequence of an insulin receptor α-subunit.

8. A method for diagnosing cancer, wherein the method comprises the steps of:

(a) measuring the amount of a free insulin receptor α-subunit in a biological sample of a subject;

(b) comparing the amount of the free insulin receptor α-subunit with that of a control; and

(c) determining the subject to have cancer when the amount of the free insulin receptor α-subunit in the biological sample of the subject is greater than that of the control.

9. The method for diagnosis of claim 8, wherein the biological sample is a blood sample.

10. The method for diagnosis of claim 9, wherein the amount of the free insulin receptor α-subunit is measured by the method of claim 1.

11. A reagent for diagnosing cancer, wherein the reagent comprises an antibody recognizing a peptide comprising the amino acid sequence of an insulin receptor α-subunit.